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10/802,451

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Lawrence R. Mills

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EXAMINER

FINDLEY, CHRISTOPHER G

ART UNIT

PAPER NUMBER

2621

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/802,451

Applicant(s)

MILLS, LAWRENCE R.

Examiner

Christopher Findley

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/17/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-4, 6, 8, 12-14, 16-18, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Koyanagi et al. (US 20040257436 A1).**

Re claim 1, Koyanagi discloses a system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising: a buffer configured to receive wide-angle image data corresponding to the monitored area (Koyanagi: Fig. 3, storing portion 30); and a processor operably coupled to said buffer and configured to transform wide angle image data received by the buffer into panoramic view data corresponding to at least one panoramic view of the monitored area, and into virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view (Koyanagi: paragraph [0012]).

Re claim 2, Koyanagi discloses a user input module configured to provide user command data to said processor (Koyanagi: Fig. 3, pointing device 14; paragraph

[0045]); and said processor being further configured to determine the virtual view data based on the user command data (Koyanagi: paragraph [0044]).

Re claim 3, Koyanagi discloses that the processor is further configured to determine reference data corresponding to an area in the panoramic view represented by the virtual view (Koyanagi: Fig. 1; paragraph [0043], "a frame 6C that represents the current position and the angle of view of the pan tilter and a pan tilter limiter 6D are superimposed to the panorama picture").

Re claim 4, Koyanagi discloses a source of wide-angle image data operably coupled to said buffer (Koyanagi: Fig. 3, lens block 15 and CCD 19 generate image data, which is compiled into a panoramic view (Figs. 4A-4F and paragraphs [0021] and [0053]-[0054])).

Re claim 6, Koyanagi discloses that said source of wide-angle image data comprises a video camera (Koyanagi: Fig. 3; paragraph [0045], "the camera portion 11 represents a video camera").

Re claim 8, Koyanagi discloses that said processor performs operations on the wide-angle image data to correct distortion in the wide-angle image data, such that said panoramic view and said virtual view are corrected images (Koyanagi: paragraph [0054]).

Re claim 12, Koyanagi discloses a display device operably coupled to said processor to display the at least one panoramic view and the at least one virtual view (Koyanagi: Fig. 3, monitor 2).

Re claim 13, Koyanagi discloses that the at least one panoramic view corresponds to a substantially undistorted view of the monitored area (Koyanagi: paragraphs [0053]-[0054], generating undistorted panoramic view), and the at least one virtual view corresponds to a portion of the at least one panoramic view (Koyanagi: paragraph [0012]).

Re claim 14, Koyanagi discloses at least one reference window overlaid on at least one portion of the at least one panoramic view, each overlaid portion corresponding to the portion of the at least one panoramic view to which the at least one virtual view corresponds (Koyanagi: Figs. 1 and 2).

Claim 16 recites the corresponding method for implementation within the system of claim 1, and, therefore, has been analyzed and rejected with respect to claim 1 above.

Re claim 17, Koyanagi discloses determining pan, tilt and zoom values (Koyanagi: Fig. 16A, step S13); and determining the portions of the buffered data to transform into virtual view data for at least one virtual view based on the pan, tilt and zoom values (Koyanagi: paragraphs [0050]-[0051]).

Re claim 18, Koyanagi discloses a step of determining reference data based on the pan, tilt and zoom values (Koyanagi: paragraph [0043]).

Re claim 20, Koyanagi discloses encoding reference data, virtual view data and panoramic view data for output (Koyanagi: paragraph [0051]).

Re claim 21, Koyanagi discloses a system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising: means for storing wide-angle image data corresponding to a monitored area (Koyanagi: Fig. 3, storing portion 30); and means for processing and transforming data received from said storing means into panoramic view data corresponding to at least one panoramic view of the monitored area and into virtual view data corresponding to at least one virtual view of a portion of the at least one panoramic view (Koyanagi: paragraph [0012]).

Re claim 22, Koyanagi discloses a means for displaying said panoramic and virtual views (Koyanagi: Fig. 3, monitor 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al. (US 20040257436 A1).**

Re claim 7, Koyanagi discloses a majority of the features of claim 7, as discussed above in claims 1, 4, and 6, but does not specifically disclose that the video camera produces wide-angle image data in NTSC format. However, the video format used by the system (NTSC, PAL, or SECAM) is simply a matter of designer's

preference in order to make the monitoring system conform to the standards of the geographical location in which it is being used, and one format (NTSC) offers no clear advantage over the other possible video formats (PAL and SECAM).

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al. (US 20040257436 A1) in view of Top et al. (US 20040047623 A1).

Re claim 9, Koyanagi discloses a majority of the features of claim 9, as discussed above in claim 1, and additionally a camera system operably coupled to the processor (Koyanagi: Fig. 3, camera portion 11), said camera system having a camera and being configured to aim the camera at a portion of the monitored area according to pan, tilt and zoom command data (Koyanagi: paragraphs [0048]-[0049]); and wherein the processor is further configured to communicate pan, tilt and zoom command data to cause the camera system to aim the camera at a portion of the monitored area (Koyanagi: paragraphs [0048]-[0049]), but Koyanagi does not specifically disclose that the camera system is a dome camera system with a dome camera. However, Top discloses a rugged miniature pan/tilt dome camera assembly for use in security systems (Top: paragraph [0003]), wherein a video camera connected to a pan motor and a tilt motor is housed in a dome camera assembly (Top: paragraph [0011]). Since both Koyanagi and Top relate to security/surveillance systems including video cameras with pan and tilt operability, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the dome camera housing of Top with the controller and photographic apparatus and photographing system of Koyanagi in order to produce

a surveillance system that is rugged and more suitable for use outdoors, with added protection for the camera provided by the dome casing (Top: paragraph [0010]). The combined system of Koyanagi and Top has all of the features of claim 9.

Re claim 10, the combined system of Koyanagi and Top discloses everything claimed, as applied above (see claim 10). In addition, Koyanagi discloses that the portion of the monitored area at which the dome camera is aimed corresponds to a virtual view (Koyanagi: paragraph [0044]).

Re claim 11, the combined system of Koyanagi and Top discloses everything claimed, as applied above (see claim 10). In addition, Koyanagi discloses that the system transforms wide-angle image data received by the buffer into virtual view data corresponding to at least one virtual view and into panoramic view data corresponding to at least one panoramic view in real time (Koyanagi: Fig. 15; paragraph [0131], the flow of the control algorithm advances to relevant steps in accordance with a user input, indicating real-time processing).

6. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al. (US 20040257436 A1) in view of Poelstra (US 5563650 A).

Re claim 5, Koyanagi discloses a majority of the features of claim 5, as discussed above in claims 1 and 4, but does not specifically disclose that the wide-angle image data source includes a fisheye lens. However, Poelstra discloses a device

for producing and consulting panoramic images, wherein images are produced using a fish eye lens and the images are transformed into panoramic images (Poelstra: column 1, lines 42-48). Since both Koyanagi and Poelstra relate to producing panoramic images for review by a user, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the fish eye lens of Poelstra with the photographing system of Koyanagi in order to produce a system capable of creating multiple panoramic views very quickly for consultation by the user (Poelstra: column 1, lines 38-41). The combined system of Koyanagi and Poelstra has all of the features of claim 5.

Re claim 15, Koyanagi disclose a majority of the features of claim 15, as discussed in claims 1 and 12 above; additionally, Koyanagi discloses that the at least one panoramic view includes a first panoramic view, the first panoramic view corresponding to a first portion of the monitored area (Koyanagi: Figs. 4A-4E, a panoramic image representing a portion of the monitoring area is extracted), and the at least one virtual view includes a first virtual view, the first virtual view corresponding to a first portion of the first panoramic view (Koyanagi: Figs. 1 and 2, the operation area represents a selected portion of the panorama operation area), but Koyanagi does not specifically disclose that the at least one panoramic view includes a second panoramic view, the second panoramic view corresponding to the remaining portion of the monitored area, and a second virtual view, the second virtual view corresponding to a second portion of the second panoramic view. However, Poelstra discloses a device for producing and consulting panoramic images, wherein images are produced using a fish eye lens and the images are transformed into panoramic images (Poelstra: column 1,

lines 42-48), and more than one panoramic image may be extracted from the initial fish eye image (Poelstra: Figs. 5 and 6; column 3, lines 42-46). Since both Koyanagi and Poelstra relate to producing images for consultation by a user, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the multiple panoramic image display of Poelstra with the panoramic/virtual view display of Koyanagi in order to produce a system capable of producing and consulting a large number of panoramic views quickly (Poelstra: column 1, lines 38-41). The combined system of Koyanagi and Poelstra has all of the features of claim 15.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al. (US 20040257436 A1) in view of Poelstra (US 5563650 A) as applied to claims 5 and 15 above, and further in view of Top et al. (US 20040047623 A1).

Re claim 19, the combined system of Koyanagi and Poelstra discloses a majority of the features of claim 19, as discussed in claims 16-18 above. Koyanagi additionally discloses that said methodology further comprising steps of: communicating pan, tilt and zoom commands to a camera system (Koyanagi: paragraph [0049]); and producing virtual view data for the first virtual view (Koyanagi: paragraph [0012]) from the camera system (Koyanagi: paragraph [0012]), but Koyanagi does not specifically disclose a second virtual view and producing virtual view data for the second virtual view. However, Poelstra discloses a device for producing and consulting panoramic images, wherein images are produced using a fish eye lens and the images are transformed into

panoramic images (Poelstra: column 1, lines 42-48), and more than one panoramic image may be extracted from the initial fish eye image (Poelstra: Figs. 5 and 6; column 3, lines 42-46). According to Poelstra, a second panoramic view may be displayed (Poelstra: Fig. 6). Since both Koyanagi and Poelstra relate to producing images for consultation by a user, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the multiple panoramic image display of Poelstra with the panoramic/virtual view display of Koyanagi, thereby creating a system capable of displaying multiple panoramic images, each panoramic image having a corresponding virtual view, in order to provide a system capable of producing and consulting a large number of panoramic views quickly (Poelstra: column 1, lines 38-41). The combined system of Koyanagi and Poelstra now discloses a majority of the features of claim 19, but the combined system of Koyanagi and Poelstra does not specifically disclose that the camera system is a dome camera system. However, Top discloses a rugged miniature pan/tilt dome camera assembly, which contains a pan and tilt operable camera housed within a dome casing (Top: paragraph [0011]) for use in a security/surveillance system (Top: paragraph [0003]). Since Koyanagi, Poelstra, and Top all relate to producing images for consultation by a user, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the dome camera housing of Top with the camera apparatus of the combined system of Koyanagi and Poelstra in order to produce a surveillance system that is rugged and more suitable for use outdoors, with added protection for the camera provided by the dome casing

(Top: paragraph [0010]). The combined system of Koyanagi, Poelstra, and Top has all of the features of claim 19.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Digital Security Multimedia Sensor
Monroe (US 20070182819 A1)
- b. Image reproduction apparatus with panoramic mode based on aspect ratio
Suzuki (US 7206017 B1)
- c. Multi-Sensor Panoramic Network Camera
Kaplinsky (US 20050141607 A1)
- d. Visual user interface for use in controlling the interaction of a device with a spatial region
Lassiter (US 6624846 B1)
- e. System for a plurality of video cameras disposed on a common network
Metzger et al. (US 20060136972 A1)
- f. Surround surveillance system for mobile body, and mobile body, car, and train using the same
Kumata et al. (US 20020005896 A1)
- g. Surround surveillance apparatus for mobile body
Kumata et al. (US 20020080017 A1)

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Findley whose telephone number is (571) 270-1199. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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